



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,747	08/29/2003	Arthur Gritzky	134366 (553-1027)	1770
45436	7590	06/24/2008	EXAMINER	
DEAN D. SMALL			CHENG, JACQUELINE	
THE SMALL PATENT LAW GROUP LLP				
225 S. MERAMEC, STE. 725T			ART UNIT	PAPER NUMBER
ST. LOUIS, MO 63105			3768	
			MAIL DATE	DELIVERY MODE
			06/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/652,747	GRITZKY ET AL.	
	Examiner	Art Unit	
	JACQUELINE CHENG	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 January 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>6/10/08</u> .	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION***Response to Arguments***

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 2, 5, 6, 9, 10, 13, 14, 16-18, and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto (US 2004/0165766 A1) further in view of Vining (US 5,782,762). Goto discloses a method for forming and displaying an image comprising acquiring a volume image, reconstructed from a plurality of sectional slice images, from a medical image system such as an ultrasonic system (paragraph 0002, 0009). Goto processes the volume data to form multiple enhanced images each being based upon anatomic features such as bone, soft tissue or blood vessels (paragraph 0093, 0103). Any of the images that are created can be displayed simultaneously side by side (fig. 9A, paragraph 0104). What Goto does not disclose is identifying a plane within the volume, the plane having a thickness, however it would be obvious to one skilled in the art that in order to process things more quickly and efficiently, from a selected volume, a subvolume can be selected to be processed, such as disclosed in Vining. Vining discloses

that after a series of two-dimensional images are stacked to create a three-dimensional volume, a targeted volume (such as a particular organ) is selected to be 3D rendered (selecting a plane with a thickness to cover the entire organ) (abstract, col. 6 line 10-25). It would be obvious to combine Vining with Goto as it would be obvious to have some sort of prescan in order to locate where exactly the observed object that is disclosed in Goto is located.

4. **Claims 1-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Argiro (US 5,986,662). Argiro discloses a method for viewing a set of voxel data on a device. The set of voxel data can be from any well known imaging modality such as ultrasound (col. 10 line 30-32). After the voxel data has been input a protocol with a group of preset viewing settings show up. The protocol can be automatically chosen depending on the type of input data (col. 12 line 7-28). The group of preset viewing settings is made up of different volume rendering images of the data for the user to select particular images from the gallery of images provided (col. 4 line 17-25. These different volume renderings can be to enhance different parts of the body such as cardia or bone mass and they can be depending upon the application the user wants, such as most dense cardia, or least dense cardia of the data set (col. 3 line 20-40). These images that are selected will appear in the examination viewer, which can be split into multiple subwindows where multiple images can be displayed simultaneously. The examination view can be used to examine only certain subvolumes of the image data (a plane having a thickness), can have multiplaner views of views such as in a C-plane, and can be used to adjust each image in each subwindow (col. 14 line 25-50). One of these adjustment

parameters is to adjust a slice thickness of the multiplanar reformatting views. By adjusting the slice thickness of each of the views each of the multiplaner views are transposed from being two-dimensional to being three-dimensional, the thicker slices in actuality being mini-volumes or slabs (col. 23-31). Therefore any desired images can be displayed simultaneously, multiple images volume rendered to display various anatomical features, multiple images of various plane thicknesses, multiple images of any well known volume rendering technique in the art (such as maximum density, surface texture, maximum transparency).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

6. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACQUELINE CHENG whose telephone number is (571)272-5596. The examiner can normally be reached on M-F 10:00-6:30.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian L Casler/
Supervisory Patent Examiner, Art Unit
3737

JC